



**BILLING CODE 3510-22-P**

**DEPARTMENT OF COMMERCE**

**National Oceanic and Atmospheric Administration**

**RIN 0648-XG799**

**Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to City of Juneau Waterfront Improvement Project**

**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

**ACTION:** Proposed incidental harassment authorization (IHA); request for comments.

**SUMMARY:** NMFS has received a request from the City and Borough of Juneau (CBJ) for authorization to take marine mammals incidental to the Juneau Dock and Harbor waterfront improvement project in Juneau, Alaska. Pursuant to the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposal to issue an IHA to incidentally take marine mammals during the specified activities. NMFS is also requesting comments on a possible one-year renewal that could be issued under certain circumstances and if all requirements are met, as described in *Request for Public Comments* at the end of this notice. NMFS will consider public comments prior to making any final decision on the issuance of the requested MMPA authorizations and agency responses will be summarized in the final notice of our decision.

**DATES:** Comments and information must be received no later than **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**.

**ADDRESSES:** Comments should be addressed to Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service.

Physical comments should be sent to 1315 East-West Highway, Silver Spring, MD 20910 and electronic comments should be sent to *ITP.guan@noaa.gov*.

*Instructions:* NMFS is not responsible for comments sent by any other method, to any other address or individual, or received after the end of the comment period. Comments received electronically, including all attachments, must not exceed a 25-megabyte file size. Attachments to electronic comments will be accepted in Microsoft Word or Excel or Adobe PDF file formats only. All comments received are a part of the public record and will generally be posted online at <https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-construction-activities> without change. All personal identifying information (e.g., name, address) voluntarily submitted by the commenter may be publicly accessible. Do not submit confidential business information or otherwise sensitive or protected information.

**FOR FURTHER INFORMATION CONTACT:** Shane Guan, Office of Protected Resources, NMFS, (301) 427-8401. Electronic copies of the applications and supporting documents, as well as a list of the references cited in this document, may be obtained online at <https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-construction-activities>. In case of problems accessing these documents, please call the contact listed above.

## **SUPPLEMENTARY INFORMATION:**

### **Background**

The MMPA prohibits the “take” of marine mammals, with certain exceptions. Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce (as delegated to NMFS) to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than

commercial fishing) within a specified geographical region if certain findings are made and either regulations are issued or, if the taking is limited to harassment, a notice of a proposed incidental take authorization may be provided to the public for review.

Authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s) and will not have an unmitigable adverse impact on the availability of the species or stock(s) for taking for subsistence uses (where relevant). Further, NMFS must prescribe the permissible methods of taking and other “means of effecting the least practicable adverse impact” on the affected species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such species or stocks for taking for certain subsistence uses (referred to in shorthand as “mitigation”); and requirements pertaining to the mitigation, monitoring and reporting of such takings are set forth.

### **National Environmental Policy Act**

Issuance of an authorization under section 101(a)(5)(D) of the MMPA requires compliance with the National Environmental Policy Act (NEPA).

NMFS preliminarily determined the issuance of the proposed IHA is consistent with categories of activities identified in CE B4 (issuance of incidental harassment authorizations under section 101(a)(5)(A) and (D) of the MMPA for which no serious injury or mortality is anticipated) of NOAA’s Companion Manual for NAO 216-6A, and we have not identified any extraordinary circumstances listed in Chapter 4 of the Companion Manual for NAO 216-6A that would preclude this categorical exclusion under NEPA.

We will review all comments submitted in response to this notice prior to making a final decision as to whether application of this CE is appropriate in this circumstance.

## **Summary of Request**

On October 25, 2018, City and Borough of Juneau (CBJ) submitted a request to NMFS requesting an IHA for the possible harassment of small numbers of harbor seals incidental to the City of Juneau Dock and Harbor waterfront improvement project in Juneau, Alaska, from June 15, 2019 to June 14, 2020. After receiving the revised project description and the revised IHA application, NMFS determined that the IHA application is adequate and complete on January 30, 2019. NMFS is proposing to authorize the take by Level B harassment of harbor seal (*Phoca vitulina*). Neither the City of Juneau nor NMFS expect mortality or serious injury to result from this activity and, therefore, an IHA is appropriate.

## **Description of Proposed Activity**

### *Overview*

The purpose of the CBJ's project is to improve the downtown waterfront area within Gastineau Channel in Juneau, Alaska, to accommodate the needs of the growing cruise ship visitor industry and its passengers while creating a waterfront that meets the expectations of a world-class facility. The project would meet the needs of an expanding cruise ship industry and its passengers by creating ample open space thereby decreasing congestion and improving pedestrian circulation.

### *Dates and Duration*

Construction of the CBJ waterfront improvements project is planned to occur between May 15, 2019 and August 31, 2020. CBJ is requesting an IHA for one year with an effective date of June 15, 2019 as in-water work will not proceed until June 15 or later and it is anticipated all in-water work will be completed prior to June 15, 2020.

### *Specified Geographic Region*

The project area is at downtown waterfront within the Gastineau Channel in Juneau, Alaska (Figure 1 of the IHA application). The channel separates Juneau on the mainland side from Douglas (now part of Juneau), on Douglas Island. The channel is navigable by large ships, only from the southeast, as far as the Douglas Bridge, which is approximately 0.5 mile north of the project area. The channel north of the bridge is navigable by smaller craft and only at high tide. The channel at the project area is approximately 0.7 mile wide. It is located within Section 23, Township 41 South, Range 67 East of the Copper River Meridian.

*Detailed Description of the CBJ Waterfront Improvement Project*

The proposed CBJ waterfront improvements project would construct a pile supported deck along the waterfront to meet the needs of an expanding cruise ship industry and its passengers by creating ample open space thereby decreasing congestion and improving pedestrian circulation. Specifically, the in-water construction portions of the improvement project include:

- Demolition of existing timber deck structures, including removal of creosote treated timber piles;
- Installation of (42) 16-inch (41-cm), (45) 18-inch (46-cm) and (40) 24-inch (61-cm) steel pipe piles for:
  - Steel pile supported structural timber deck over open space;
  - Steel pile supported structural timber deck with a ramp adjacent to the existing parking garage;
  - Steel pile supported structural timber deck with concrete overlay for transportation staging area;

- Steel pile supported cast in place concrete retaining wall for connection to shore and erosion protection; and
- Installation and removal of (87) 18-inch (46-cm) or smaller temporary template piles.

A list of pile driving and removal activities is provided in Table 1. The total number of days that involve in-water pile driving is estimated to be 82 days.

**Table 1. Summary of in-water pile driving activities.**

<b>Method</b>	<b>Pile type and size</b>	<b>Total # piles</b>	<b># piles/day</b>	<b>Pile driving /removal duration (sec.) per pile (vib) or strikes per pile (impact)</b>	<b>Work days</b>
Vibratory pile removal	Timber piles, unknown diameter but assumed to be no more than 14"	100	10	900	10
Vibratory piling for supported dock	Steel piles, 16"	42*	5	5400	9
Impact proofing for supported dock	Steel piles, 16"	42*	5	150	9
Vibratory piling for supported dock	Steel piles, 18"	45*	5	5400	9
Impact proofing for supported dock	Steel piles, 18"	45*	5	150	9
Vibratory piling for temporary piles	Steel piles, 18"	87	5	5400	18
Vibratory pile removal for temporary piles	Steel piles, 18"	87	5	900	18
<b>Total</b>		<b>274</b>			<b>82</b>

\*Vibratory driving and impact proofing will occur on separate days.

Proposed mitigation, monitoring, and reporting measures are described in detail later in this document (please see "Proposed Mitigation" and "Proposed Monitoring and Reporting").

## Description of Marine Mammals in the Area of Specified Activities

Sections 3 and 4 of the application summarize available information regarding status and trends, distribution and habitat preferences, and behavior and life history, of the potentially affected species. Additional information regarding population trends and threats may be found in NMFS's Stock Assessment Reports (SAR; <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments>).

Table 2 lists all species with expected potential for occurrence in the Southeast Alaskan waters and summarizes information related to the population or stock, including regulatory status under the MMPA and ESA and potential biological removal (PBR), where known. For taxonomy, we follow Committee on Taxonomy (2018). PBR is defined by the MMPA as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population (as described in NMFS's SARs). While no mortality is anticipated or authorized here, PBR and annual serious injury and mortality from anthropogenic sources are included here as gross indicators of the status of the species and other threats.

Marine mammal abundance estimates presented in this document represent the total number of individuals that make up a given stock or the total number estimated within a particular study or survey area. NMFS's stock abundance estimates for most species represent the total estimate of individuals within the geographic area, if known, that comprises that stock. For some species, this geographic area may extend beyond U.S. waters. All managed stocks in this region are assessed in NMFS's U.S. Alaska Marine Mammal SARs (Carretta *et al.*, 2017). All values presented in Table 2 are the most recent available at the time of publication and are available in the 2017 SARs (Muto *et al.*, 2018); and draft 2018 SARs (available online at:

<https://www.fisheries.noaa.gov/national/marine-mammal-protection/draft-marine-mammal-stock-assessment-reports>).

**Table 2. Marine mammals with potential presence within the proposed project area.**

Common name	Scientific name	Stock	ESA/MMPA status; Strategic (Y/N) <sup>1</sup>	Stock abundance (CV, N <sub>min</sub> , most recent abundance survey) <sup>2</sup>	PBR	Annual M/SI <sup>3</sup>
Order Cetartiodactyla – Cetacea – Superfamily Mysticeti (baleen whales)						
Family Balaenopteridae						
Humpback whale	<i>Megaptera novaneagliae</i>	Central North Pacific	E/D; Y	10,103 (0.300, 7,890)	82	8.5
Family Delphinidae						
Killer whale	<i>Orcinus orca</i>	Eastern N. Pacific Northern resident	N	261 (NA, 261)	1.96	0
		Eastern N. Pacific Alaska Resident	N	2,347 (NA, 2,347)	24	1
Order Carnivora – Superfamily Pinnipedia						
Family Phocidae (earless seals)						
Harbor seal	<i>Phoca vitulina</i>	Lynn Canal/Stephens Passage	N	9,478 (NA, 8,605)	155	0

<sup>1</sup>Endangered Species Act (ESA) status: Endangered (E), Threatened (T)/MMPA status: Depleted (D). A dash (-) indicates that the species is not listed under the ESA or designated as depleted under the MMPA. Under the MMPA, a strategic stock is one for which the level of direct human-caused mortality exceeds PBR or which is determined to be declining and likely to be listed under the ESA within the foreseeable future. Any species or stock listed under the ESA is automatically designated under the MMPA as depleted and as a strategic stock.

<sup>2</sup>NMFS marine mammal stock assessment reports online at: <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessment-reports-region>. CV is coefficient of variation; N<sub>min</sub> is the minimum estimate of stock abundance.

All species that could potentially occur in the proposed survey areas are included in Table 2. However, the presence of humpback whale and killer whale are extremely rare, and the implementation of monitoring and mitigation measures are such that take is not expected to occur, and they are not discussed further beyond the explanation provided here. Although these two species have been sighted within the Gastineau Channel near the vicinity of the project area, CBJ proposes to implement strict monitoring and mitigation measures and implement shutdown to prevent any takes of these two species. Thus, the take of this marine mammal stock can be avoided, as their occurrence would be considered unlikely and mitigation and monitoring is expected to prevent take should they occur (see details in Proposed Mitigation section).



## *Marine Mammal Hearing*

Hearing is the most important sensory modality for marine mammals underwater, and exposure to anthropogenic sound can have deleterious effects. To appropriately assess the potential effects of exposure to sound, it is necessary to understand the frequency ranges marine mammals are able to hear. Current data indicate that not all marine mammal species have equal hearing capabilities (*e.g.*, Richardson *et al.*, 1995; Wartzok and Ketten, 1999; Au and Hastings, 2008). To reflect this, Southall *et al.* (2007) recommended that marine mammals be divided into functional hearing groups based on directly measured or estimated hearing ranges on the basis of available behavioral response data, audiograms derived using auditory evoked potential techniques, anatomical modeling, and other data. Note that no direct measurements of hearing ability have been successfully completed for mysticetes (*i.e.*, low-frequency cetaceans). Subsequently, NMFS (2016) described generalized hearing ranges for these marine mammal hearing groups. Generalized hearing ranges were chosen based on the approximately 65 decibel (dB) threshold from the normalized composite audiograms, with the exception for lower limits for low-frequency cetaceans where the lower bound was deemed to be biologically implausible and the lower bound from Southall *et al.* (2007) retained. The functional groups and the associated frequencies are indicated below (note that these frequency ranges correspond to the range for the composite group, with the entire range not necessarily reflecting the capabilities of every species within that group):

- Low-frequency cetaceans (mysticetes): generalized hearing is estimated to occur between approximately 7 hertz (Hz) and 35 kilohertz (kHz);

- Mid-frequency cetaceans (larger toothed whales, beaked whales, and most delphinids): generalized hearing is estimated to occur between approximately 150 Hz and 160 kHz;
- High-frequency cetaceans (porpoises, river dolphins, and members of the genera *Kogia* and *Cephalorhynchus*; including two members of the genus *Lagenorhynchus*, on the basis of recent echolocation data and genetic data): generalized hearing is estimated to occur between approximately 275 Hz and 160 kHz;
- Pinnipeds in water; Phocidae (true seals): generalized hearing is estimated to occur between approximately 50 Hz to 86 kHz; and
- Pinnipeds in water; Otariidae (eared seals): generalized hearing is estimated to occur between 60 Hz and 39 kHz.

The pinniped functional hearing group was modified from Southall *et al.* (2007) on the basis of data indicating that phocid species have consistently demonstrated an extended frequency range of hearing compared to otariids, especially in the higher frequency range (Hemilä *et al.*, 2006; Kastelein *et al.*, 2009; Reichmuth *et al.*, 2013).

For more detail concerning these groups and associated frequency ranges, please see NMFS (2018) for a review of available information. Three marine mammal species (two cetacean and one pinniped (*i.e.*, harbor seal) species) have the reasonable potential to co-occur with the proposed construction activity. Please refer to Table 2. Of the cetacean species that may be present, one species is classified as low-frequency cetaceans (*i.e.*, humpback whale) and one is classified as mid-frequency cetacean (*i.e.*, killer whale). However, as mentioned earlier, monitoring and mitigation measures will be implemented to avoid the take of these cetacean species.

## **Potential Effects of Specified Activities on Marine Mammals and their Habitat**

This section includes a summary and discussion of the ways that components of the specified activity may impact marine mammals and their habitat. The “Estimated Take by Incidental Harassment” section later in this document will include a quantitative analysis of the number of individuals that are expected to be taken by this activity. The “Negligible Impact Analysis and Determination” section will consider the content of this section, the “Estimated Take by Incidental Harassment” section, and the “Proposed Mitigation” section, to draw conclusions regarding the likely impacts of these activities on the reproductive success or survivorship of individuals and how those impacts on individuals are likely to impact marine mammal species or stocks.

Potential impacts to marine mammals from the proposed CBJ waterfront improvement project are from noise generated during in-water pile driving and pile removal activities.

### *Acoustic Effects*

Here, we first provide background information on marine mammal hearing before discussing the potential effects of the use of active acoustic sources on marine mammals.

The CBJ’s waterfront improvement project using in-water pile driving and pile removal could adversely affect marine mammal species and stocks by exposing them to elevated noise levels in the vicinity of the activity area.

Exposure to high intensity sound for a sufficient duration may result in auditory effects such as a noise-induced threshold shift (TS) —an increase in the auditory threshold after exposure to noise (Finneran *et al.*, 2005). Factors that influence the amount of threshold shift include the amplitude, duration, frequency content, temporal pattern, and energy distribution of noise exposure. The magnitude of hearing threshold shift normally decreases over time following

cessation of the noise exposure. The amount of TS just after exposure is the initial TS. If the TS eventually returns to zero (*i.e.*, the threshold returns to the pre-exposure value), it is a temporary threshold shift (TTS) (Southall *et al.*, 2007).

*Threshold Shift (noise-induced loss of hearing)* – When animals exhibit reduced hearing sensitivity (*i.e.*, sounds must be louder for an animal to detect them) following exposure to an intense sound or sound for long duration, it is referred to as a noise-induced TS. An animal can experience TTS or permanent threshold shift (PTS). TTS can last from minutes or hours to days (*i.e.*, there is complete recovery), can occur in specific frequency ranges (*i.e.*, an animal might only have a temporary loss of hearing sensitivity between the frequencies of 1 and 10 kHz), and can be of varying amounts (for example, an animal's hearing sensitivity might be reduced initially by only 6 dB or reduced by 30 dB). PTS is permanent, but some recovery is possible. PTS can also occur in a specific frequency range and amount as mentioned above for TTS.

For marine mammals, published data are limited to the captive bottlenose dolphin, beluga, harbor porpoise, and Yangtze finless porpoise (Finneran, 2015). For pinnipeds in water, data are limited to measurements of TTS in harbor seals, an elephant seal, and California sea lions (Kastak *et al.*, 1999, 2005; Kastelein *et al.*, 2012b).

Lucke *et al.* (2009) found a TS of a harbor porpoise after exposing it to airgun noise with a received sound pressure level (SPL) at 200.2 dB (peak-to-peak) re: 1 micropascal ( $\mu\text{Pa}$ ), which corresponds to a sound exposure level of 164.5 dB re: 1  $\mu\text{Pa}^2 \text{ s}$  after integrating exposure. Because the airgun noise is a broadband impulse, one cannot directly determine the equivalent of root mean square (rms) SPL from the reported peak-to-peak SPLs. However, applying a conservative conversion factor of 16 dB for broadband signals from seismic surveys (McCauley, *et al.*, 2000) to correct for the difference between peak-to-peak levels reported in Lucke *et al.*

(2009) and rms SPLs, the rms SPL for TTS would be approximately 184 dB re: 1  $\mu$ Pa, and the received levels associated with PTS (Level A harassment) would be higher. Therefore, based on these studies, NMFS recognizes that TTS of harbor porpoises is lower than other cetacean species empirically tested (Finneran & Schlundt, 2010; Finneran *et al.*, 2002; Kastelein and Jennings, 2012).

Marine mammal hearing plays a critical role in communication with conspecifics, and interpretation of environmental cues for purposes such as predator avoidance and prey capture. Depending on the degree (elevation of threshold in dB), duration (*i.e.*, recovery time), and frequency range of TTS, and the context in which it is experienced, TTS can have effects on marine mammals ranging from discountable to serious (similar to those discussed in auditory masking, below). For example, a marine mammal may be able to readily compensate for a brief, relatively small amount of TTS in a non-critical frequency range that occurs during a time where ambient noise is lower and there are not as many competing sounds present. Alternatively, a larger amount and longer duration of TTS sustained during time when communication is critical for successful mother/calf interactions could have more serious impacts. Also, depending on the degree and frequency range, the effects of PTS on an animal could range in severity, although it is considered generally more serious because it is a permanent condition. Of note, reduced hearing sensitivity as a simple function of aging has been observed in marine mammals, as well as humans and other taxa (Southall *et al.*, 2007), so one can infer that strategies exist for coping with this condition to some degree, though likely not without cost.

In addition, chronic exposure to excessive, though not high-intensity, noise could cause masking at particular frequencies for marine mammals, which utilize sound for vital biological functions (Clark *et al.*, 2009). Acoustic masking is when other noises such as from human

sources interfere with animal detection of acoustic signals such as communication calls, echolocation sounds, and environmental sounds important to marine mammals. Therefore, under certain circumstances, marine mammals whose acoustical sensors or environment are being severely masked could also be impaired from maximizing their performance fitness in survival and reproduction.

Masking occurs at the frequency band that the animals utilize. Therefore, since noise generated from vibratory pile driving is mostly concentrated at low frequency ranges, it may have less effect on high frequency echolocation sounds by odontocetes (toothed whales). However, lower frequency man-made noises are more likely to affect detection of communication calls and other potentially important natural sounds such as surf and prey noise. It may also affect communication signals when they occur near the noise band and thus reduce the communication space of animals (*e.g.*, Clark *et al.*, 2009) and cause increased stress levels (*e.g.*, Foote *et al.*, 2004; Holt *et al.*, 2009).

Unlike TS, masking, which can occur over large temporal and spatial scales, can potentially affect the species at population, community, or even ecosystem levels, as well as individual levels. Masking affects both senders and receivers of the signals and could have long-term chronic effects on marine mammal species and populations. Recent science suggests that low frequency ambient sound levels have increased by as much as 20 dB (more than three times in terms of SPL) in the world's ocean from pre-industrial periods, and most of these increases are from distant shipping (Hildebrand, 2009). For CBJ's waterfront improvement project, noises from vibratory pile driving and pile removal contribute to the elevated ambient noise levels in the project area, thus increasing potential for or severity of masking. Baseline ambient noise

levels in the vicinity of project area are high due to ongoing shipping, construction and other activities in the coastal waters of Juneau.

Finally, marine mammals' exposure to certain sounds could lead to behavioral disturbance (Richardson *et al.*, 1995), such as changing durations of surfacing and dives, number of blows per surfacing, or moving direction and/or speed; reduced/increased vocal activities; changing/cessation of certain behavioral activities (such as socializing or feeding); visible startle response or aggressive behavior (such as tail/fluke slapping or jaw clapping); avoidance of areas where noise sources are located; and/or flight responses (*e.g.*, pinnipeds flushing into water from haulouts or rookeries).

The onset of behavioral disturbance from anthropogenic noise depends on both external factors (characteristics of noise sources and their paths) and the receiving animals (hearing, motivation, experience, demography) and is also difficult to predict (Southall *et al.*, 2007). Currently NMFS uses a received level of 160 dB re 1  $\mu$ Pa (rms) to predict the onset of behavioral harassment from impulse noises (such as impact pile driving), and 120 dB re 1  $\mu$ Pa (rms) for continuous noises (such as vibratory pile driving). For the CBJ's waterfront improvement project, both 120-dB and 160-dB levels are considered for effects analysis because CBJ plans to use both impact pile driving and vibratory pile driving and pile removal.

The biological significance of many of these behavioral disturbances is difficult to predict, especially if the detected disturbances appear minor. However, the consequences of behavioral modification could be biologically significant if the change affects growth, survival, and/or reproduction, which depends on the severity, duration, and context of the effects.

#### *Potential Effects on Marine Mammal Habitat*

The primary potential impacts to marine mammal habitat are associated with elevated sound levels produced by vibratory pile removal and pile driving in the area. However, other potential impacts to the surrounding habitat from physical disturbance are also possible.

With regard to fish as a prey source for cetaceans and pinnipeds, fish are known to hear and react to sounds and to use sound to communicate (Tavolga *et al.*, 1981) and possibly avoid predators (Wilson and Dill, 2002). Experiments have shown that fish can sense both the strength and direction of sound (Hawkins, 1981). Primary factors determining whether a fish can sense a sound signal, and potentially react to it, are the frequency of the signal and the strength of the signal in relation to the natural background noise level.

The level of sound at which a fish will react or alter its behavior is usually well above the detection level. Fish have been found to react to sounds when the sound level increased to about 20 dB above the detection level of 120 dB (Ona, 1988); however, the response threshold can depend on the time of year and the fish's physiological condition (Engas *et al.*, 1993). In general, fish react more strongly to pulses of sound (such as noise from impact pile driving) rather than continuous signals (such as noise from vibratory pile driving) (Blaxter *et al.*, 1981), and a quicker alarm response is elicited when the sound signal intensity rises rapidly compared to sound rising more slowly to the same level.

During the coastal construction, only a small fraction of the available habitat would be ensonified at any given time. Disturbance to fish species would be short-term and fish would return to their pre-disturbance behavior once the pile driving activity ceases. Thus, the proposed construction would have little, if any, impact on marine mammals' prey availability in the area where construction work is planned.



Finally, the Gastineau Channel in front of downtown Juneau is not considered a feeding area of marine mammals.

### **Estimated Take**

This section provides an estimate of the number of incidental takes authorized through this IHA, which will inform both NMFS' consideration of whether the number of takes is "small" and the negligible impact determination.

Harassment is the only type of take expected to result from these activities. Except with respect to certain activities not pertinent here, section 3(18) of the MMPA defines "harassment" as any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild (Level A harassment); or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B harassment).

Authorized takes would be by Level B harassment only, in the form of disruption of behavioral patterns for individual marine mammals resulting from exposure to noise generated from vibratory pile driving and removal. Based on the nature of the activity and the anticipated effectiveness of the mitigation measures (*i.e.*, shutdown measures – discussed in detail below in Proposed Mitigation section), Level A harassment is neither anticipated nor proposed to be authorized.

As described previously, no mortality is anticipated or authorized for this activity. Below we describe how the take is estimated.

Described in the most basic way, we estimate take by considering: (1) acoustic thresholds above which NMFS believes the best available science indicates marine mammals will be

behaviorally harassed or incur some degree of permanent hearing impairment; (2) the area or volume of water that will be ensonified above these levels in a day; (3) the density or occurrence of marine mammals within these ensonified areas; and, (4) the number of days of activities. Below, we describe these components in more detail and present the take estimate.

### *Acoustic Thresholds*

Using the best available science, NMFS has developed acoustic thresholds that identify the received level of underwater sound above which exposed marine mammals would be reasonably expected to be behaviorally harassed (equated to Level B harassment) or to incur PTS of some degree (equated to Level A harassment).

Level B Harassment for non-explosive sources – Though significantly driven by received level, the onset of behavioral disturbance from anthropogenic noise exposure is also informed to varying degrees by other factors related to the source (*e.g.*, frequency, predictability, duty cycle), the environment (*e.g.*, bathymetry), and the receiving animals (hearing, motivation, experience, demography, behavioral context) and can be difficult to predict (Southall *et al.*, 2007, Ellison *et al.*, 2012). Based on what the available science indicates and the practical need to use a threshold based on a factor that is both predictable and measurable for most activities, NMFS uses a generalized acoustic threshold based on received level to estimate the onset of behavioral harassment. NMFS predicts that marine mammals are likely to be behaviorally harassed in a manner we consider Level B harassment when exposed to underwater anthropogenic noise above received levels of 120 dB re 1  $\mu$ Pa (rms) for continuous (*e.g.* vibratory pile-driving, drilling) and above 160 dB re 1  $\mu$ Pa (rms) for non-explosive impulsive (*e.g.*, seismic airguns) or intermittent (*e.g.*, scientific sonar) sources.

Applicant's proposed activity includes the generation of impulse (impact pile driving) and continuous (vibratory pile driving and removal) sources; and, therefore, both 160- and 120-dB re 1  $\mu$ Pa (rms) are used.

Level A harassment for non-explosive sources - NMFS' Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Technical Guidance, 2016 and 2018) identifies dual criteria to assess auditory injury (Level A harassment) to five different marine mammal groups (based on hearing sensitivity) as a result of exposure to noise from two different types of sources (impulsive or non-impulsive). Applicant's proposed activity would generate and non-impulsive (vibratory pile driving and pile removal) noises. These thresholds were developed by compiling and synthesizing the best available science and soliciting input multiple times from both the public and peer reviewers to inform the final product and are provided in the table below. The references, analysis, and methodology used in the development of the thresholds are described in NMFS 2018 Technical Guidance, which may be accessed at: <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-acoustic-technical-guidance>.

**Table 3. Current Acoustic Exposure Criteria for Non-explosive Sound Underwater.**

Hearing Group	PTS Onset Thresholds		Behavioral Thresholds	
	Impulsive	Non-impulsive	Impulsive	Non-impulsive
<b>Low-Frequency (LF) Cetaceans</b>	$L_{pk,flat}$ : 219 dB $L_{E,LF,24h}$ : 183 dB	$L_{E,LF,24h}$ : 199 dB	$L_{rms,flat}$ : 160 dB	$L_{rms,flat}$ : 120 dB
<b>Mid-Frequency (MF) Cetaceans</b>	$L_{pk,flat}$ : 230 dB $L_{E,MF,24h}$ : 185 dB	$L_{E,MF,24h}$ : 198 dB		
<b>High-Frequency (HF) Cetaceans</b>	$L_{pk,flat}$ : 202 dB $L_{E,HF,24h}$ : 155 dB	$L_{E,HF,24h}$ : 173 dB		
<b>Phocid Pinnipeds (PW) (Underwater)</b>	$L_{pk,flat}$ : 218 dB $L_{E,PW,24h}$ : 185 dB	$L_{E,PW,24h}$ : 201 dB		
<b>Otariid Pinnipeds (OW)</b>	$L_{pk,flat}$ : 232 dB $L_{E,OW,24h}$ : 203 dB	$L_{E,OW,24h}$ : 219 dB		

<b>(Underwater)</b>				
<p>* Dual metric acoustic thresholds for impulsive sounds: Use whichever results in the largest isopleth for calculating PTS onset. If a non-impulsive sound has the potential of exceeding the peak sound pressure level thresholds associated with impulsive sounds, these thresholds should also be considered.</p> <p>Note: Peak sound pressure (L<sub>pk</sub>) has a reference value of 1 <math>\mu</math>Pa, and cumulative sound exposure level (LE) has a reference value of 1 <math>\mu</math>Pa<sup>2</sup>s. In this Table, thresholds are abbreviated to reflect American National Standards Institute standards (ANSI 2013). However, peak sound pressure is defined by ANSI as incorporating frequency weighting, which is not the intent for this Technical Guidance. Hence, the subscript “flat” is being included to indicate peak sound pressure should be flat weighted or unweighted within the generalized hearing range. The subscript associated with cumulative sound exposure level thresholds indicates the designated marine mammal auditory weighting function (LF, MF, and HF cetaceans, and PW and OW pinnipeds) and that the recommended accumulation period is 24 hours. The cumulative sound exposure level thresholds could be exceeded in a multitude of ways (<i>i.e.</i>, varying exposure levels and durations, duty cycle). When possible, it is valuable for action proponents to indicate the conditions under which these acoustic thresholds will be exceeded.</p>				

### *Ensonified Area*

Here, we describe operational and environmental parameters of the activity that will feed into identifying the area ensonified above the acoustic thresholds.

#### Source Levels

Source levels for vibratory driving and removal of 16-in and 18-in steel piles are based on measurement of vibratory pile removal of 18-in steel piles at Kake, Alaska (Denes *et al.*, 2016). The measured SPL<sub>rms</sub> at 7 m was 156.2 dB re 1  $\mu$ Pa, and is normalized to 153.9 dB re 1  $\mu$ Pa at 10 m.

Source levels for impact pile driving of 16-in and 18-in steel piles are based on JASCO’s pile driving review for a 24-in steel pile (Yurk *et al.*, 2015). The values are 175 dB re 1  $\mu$ Pa<sup>2</sup>-s, 190 dB re 1  $\mu$ Pa, and 205 dB re 1  $\mu$ Pa for single strike SEL, SPL<sub>rms</sub>, and SPL<sub>pk</sub>, respectively.

Source level for vibratory timber pile removal is based on measurements of vibratory pile removal at Port Townsend, Washington (WSDOT, 2011). The measured level was 150 dB re 1  $\mu$ Pa at 52 ft, and is corrected to 153 dB re 1  $\mu$ Pa at 10 m.

A summary of the source levels are provided in Table 4.

**Table 4. Summary of in-water pile driving source levels (at 10 m from source).**

Method	Pile type / size (inch)	SEL, dB re 1 $\mu\text{Pa}^2\text{-s}$	SPL <sub>rms</sub> , dB re 1 $\mu\text{Pa}$	SPL <sub>pk</sub> , dB re 1 $\mu\text{Pa}$
Vibratory driving / removal	Steel, 16- and 18-in	153.9	153.9	-
Vibratory removal	Timber	153	153	-
Impact pile driving (proof)	Steel, 16- and 18-in	175	190	205

These source levels are used to compute the Level A harassment zones and to estimate the Level B harassment zones. For Level A harassment zones, since the peak source levels for both pile driving are below the injury thresholds, cumulative SEL were used to do the calculations using the NMFS acoustic guidance (NMFS 2018).

#### *Estimating Harassment Zones*

The Level B harassment ensonified areas for vibratory removal of timber piles are based on the above source level of 153 dB<sub>rms</sub> re 1  $\mu\text{Pa}$  at 10 m, applying practical spreading loss of  $15 \cdot \log(R)$  for transmission loss calculation. The derived distance to the 120-dB Level B zone is 1,585 m.

For Level B harassment ensonified areas for vibratory pile driving and removal of the 16-in and 18-in steel piles, the distance is based on source level of 153.9 dB re 1  $\mu\text{Pa}$  at 10 m, applying practical spreading loss of  $15 \cdot \log(R)$  for transmission loss calculation. The derived distance to the 120-dB zone is 1,820 m.

For Level B harassment ensonified areas for impact proofing of 16-in and 18-in steel piles, the distance is based on source level of 190 dB re 1  $\mu\text{Pa}$  at 10 m, applying practical spreading loss of  $15 \cdot \log(R)$  for transmission loss calculation. The derived distance to the 160-dB zone is 1,000 m.

For Level A harassment, calculation is based on pile driving duration of each pile and the number of piles installed or removed per day, using NMFS optional spreadsheet.

The modeled distances to Level A and Level B harassment zones for various marine mammals are provided in Table 5. As discussed above, the only marine mammal that could occur in the vicinity of the project area is the harbor seal (phocid), and, on rare occasions, humpback and killer whales (mid-frequency cetacean). The inclusion of other marine mammal hearing groups in Table 5 is for information purposes.

**Table 5. Modeled distances to harassment zones.**

Pile type, size & pile driving method	Injury distance (m)					Level B ZOI (m)
	LF cetacean	MF cetacean	HF cetacean	Phocid	Otariid	
Vibratory drive 16- & 18-in pile (5400 s/pile, 5 piles/day)	8.8	0.8	13	5.3	0.4	1820
Vibratory removal 16- & 18-in temporary pile (900 s/pile, 5 piles/day)	2.7	0.2	3.9	1.6	0.1	1820
Vibratory removal timber pile (900 s/pile, 10 piles/day)	3.7	0.3	5.4	2.2	0.2	1585
Impact proof of 16- & 18-in pile (150 strikes/pile, 5 piles/day)	241.4	8.6	287.6	129.2	9.4	1000

### *Marine Mammal Occurrence*

In this section we provide the information about the presence, density, or group dynamics of marine mammals that will inform the take calculations.

There are no reliable density estimates for marine mammals (harbor seal, humpback whale, and killer whale) in the project area. However, there are good observations of harbor seal numbers that generally occur in the project area.

Harbor seals are residents in the project vicinity and observed within the action area on a regular basis. Typically there are one to two harbor seals present near the new Port of Juneau Cruise Ship Berths and can be found there year round. In addition, a smaller amount of harbor seals have been observed near the Douglas Island Pink and Chum, Inc. (DIPAC) salmon

hatchery which is approximately five km north of the project area. The applicant states that based on observations and discussion with the hatchery personnel, a maximum of 41 harbor seals have been observed transiting in nearby areas between the hatchery and the project area. This number in addition to the 1-2 resident harbor seals at the project area makes a total maximum harbor sea that could be affected by in-water pile driving during a typical day to be 43.

Humpback whale and killer whale are rarely seen in the vicinity of the project area. CBJ will implement shutdown measures if these species are sighted moving towards the Level B harassment zone.

#### *Take Calculation and Estimation*

Here we describe how the information provided above is brought together to produce a quantitative take estimate.

For harbor seal takes, take number is calculated as: Take = animal number in a typical day near the project area x operating days = 43 x 82 = 3526 animals.

A summary of estimated takes in relation to population percentage is provided in Table 6.

**Table 6. Estimated Take Numbers.**

<b>Species</b>	<b>Estimated Level A take</b>	<b>Estimated Level B take</b>	<b>Estimated total take</b>	<b>Abundance</b>
Harbor seal	0	3526	3526	9,478

#### **Proposed Mitigation**

In order to issue an IHA under section 101(a)(5)(D) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to such activity, and other means of effecting the least practicable impact on such species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such

species or stock for taking for certain subsistence uses (latter not applicable for this action). NMFS regulations require applicants for incidental take authorizations to include information about the availability and feasibility (economic and technological) of equipment, methods, and manner of conducting such activity or other means of effecting the least practicable adverse impact upon the affected species or stocks and their habitat (50 CFR 216.104(a)(11)).

In evaluating how mitigation may or may not be appropriate to ensure the least practicable adverse impact on species or stocks and their habitat, as well as subsistence uses where applicable, we carefully consider two primary factors:

1) The manner in which, and the degree to which, the successful implementation of the measure(s) is expected to reduce impacts to marine mammals, marine mammal species or stocks, and their habitat. This considers the nature of the potential adverse impact being mitigated (likelihood, scope, range). It further considers the likelihood that the measure will be effective if implemented (probability of accomplishing the mitigating result if implemented as planned) the likelihood of effective implementation (probability implemented as planned); and

2) The practicability of the measures for applicant implementation, which may consider such things as cost, impact on operations, and, in the case of a military readiness activity, personnel safety, practicality of implementation, and impact on the effectiveness of the military readiness activity.

#### *Mitigation for Marine Mammals and their Habitat*

##### 1. Time Restriction.

Work would occur only during daylight hours, when visual monitoring of marine mammals can be conducted.

##### 2. Establishing and Monitoring Level A and Level B Harassment Zones and Shutdown Zones.



CBJ shall establish shutdown zones that encompass the distances within which marine mammals except harbor seal could be taken by Level B harassment (see Table 5 above).

For harbor seals, CBJ shall establish shutdown zones that encompass the distances within which a seal could be taken by Level A harassment (see Table 5 above). For Level A harassment zones that are less than 10 m from the source, a minimum of 10 m distance should be established as a shutdown zone.

A summary of shutdown zones is provided in Table 7.

**Table 7. Shutdown Zones for Various Pile Driving Activities and Marine Mammal Hearing Groups.**

Pile type, size & pile driving method	Shutdown distance (m)	
	Cetacean	Phocid
Vibratory drive and removal of 16- & 18-in steel piles	1,820	10
Vibratory removal timber pile (900 s/pile, 10 piles/day)	1,585	
Impact proof of 16- & 18-in pile (150 strikes/pile, 5 piles/day)	1,000	130

CBJ shall also establish a Zone of Influence (ZOI) for harbor seals based on the Level B harassment zones for take monitoring where received underwater SPLs are higher than 160 dB<sub>rms</sub> re 1 µPa for impulsive noise sources (impact pile driving) and 120 dB<sub>rms</sub> re 1 µPa for continuous noise sources (vibratory pile driving and pile removal). For all other marine mammals, the ZOI is the same as the shutdown zones.

NMFS-approved protected species observers (PSO) shall conduct an initial 30-minute survey of the shutdown zones to ensure that no marine mammals are seen within the zones before pile driving and pile removal of a pile segment begins. If marine mammals are found within the shutdown zone, pile driving of the segment would be delayed until they move out of the area. If a marine mammal is seen above water and then dives below, the contractor would

wait 15 minutes. If no marine mammals are seen by the observer in that time it can be assumed that the animal has moved beyond the shutdown zone.

### 3. Soft-start.

A “soft-start” technique is intended to allow marine mammals to vacate the area before the impact pile driver reaches full power. Whenever there has been downtime of 30 minutes or more without impact pile driving, the contractor will initiate the driving with ramp-up procedures described below.

Soft start for impact hammers requires contractors to provide an initial set of three strikes from the impact hammer at 40 percent energy, followed by a 1-minute waiting period, then two subsequent three-strike sets. Each day, CBJ will use the soft-start technique at the beginning of impact pile driving, or if impact pile driving has ceased for more than 30 minutes.

### 4. Shutdown Measures.

CBJ shall implement shutdown measures if a marine mammal is detected within or enters a shutdown zone listed in Table 7.

Further, CBJ shall implement shutdown measures if the number of authorized takes for harbor seals reaches the limit under the IHA and if seals are sighted within the vicinity of the project area and are approaching the Level B harassment zone during in-water construction activities.

Based on our evaluation of the required measures, NMFS has preliminarily determined that the prescribed mitigation measures provide the means effecting the least practicable impact on the affected species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance.

## **Proposed Monitoring and Reporting**

In order to issue an IHA for an activity, section 101(a)(5)(D) of the MMPA states that NMFS must set forth, requirements pertaining to the monitoring and reporting of such taking. The MMPA implementing regulations at 50 CFR 216.104 (a)(13) indicate that requests for authorizations must include the suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species and of the level of taking or impacts on populations of marine mammals that are expected to be present in the proposed action area. Effective reporting is critical both to compliance as well as ensuring that the most value is obtained from the required monitoring.

Monitoring and reporting requirements prescribed by NMFS should contribute to improved understanding of one or more of the following:

- Occurrence of marine mammal species or stocks in the area in which take is anticipated (*e.g.*, presence, abundance, distribution, density);
- Nature, scope, or context of likely marine mammal exposure to potential stressors/impacts (individual or cumulative, acute or chronic), through better understanding of: (1) action or environment (*e.g.*, source characterization, propagation, ambient noise); (2) affected species (*e.g.*, life history, dive patterns); (3) co-occurrence of marine mammal species with the action; or (4) biological or behavioral context of exposure (*e.g.*, age, calving or feeding areas);
- Individual marine mammal responses (behavioral or physiological) to acoustic stressors (acute, chronic, or cumulative), other stressors, or cumulative impacts from multiple stressors;
- How anticipated responses to stressors impact either: (1) long-term fitness and survival of individual marine mammals; or (2) populations, species, or stocks;

- Effects on marine mammal habitat (*e.g.*, marine mammal prey species, acoustic habitat, or other important physical components of marine mammal habitat); and
- Mitigation and monitoring effectiveness.

#### *Proposed Monitoring Measures*

CBJ shall employ NMFS-approved PSOs to conduct marine mammal monitoring for its waterfront improvement project at Juneau Dock and Harbor. The purposes of marine mammal monitoring are to implement mitigation measures and learn more about impacts to marine mammals from CBJ's construction activities. The PSOs will observe and collect data on marine mammals in and around the project area for 30 minutes before, during, and for 30 minutes after all pile removal and pile installation work. NMFS-approved PSOs shall meet the following requirements:

1. Independent observers (*i.e.*, not construction personnel) are required;
2. At least one observer must have prior experience working as an observer;
3. Other observers may substitute education (undergraduate degree in biological science or related field) or training for experience;
4. Where a team of three or more observers are required, one observer should be designated as lead observer or monitoring coordinator. The lead observer must have prior experience working as an observer; and
5. NMFS will require submission and approval of observer CVs.

Monitoring of marine mammals around the construction site shall be conducted using high-quality binoculars (*e.g.*, Zeiss, 10 x 42 power).

CBJ shall employ a minimum of 2 PSOs to observe and collect data on marine mammals in and around the pile driving vicinity.

PSOs shall be placed at high evaluation locations such as the boardwalk and the observation deck of the City Library to conduct marine mammal monitoring.

PSOs will work shifts of a maximum of four consecutive hours and will work no more than 12 hours in any 24-hour period.

6. PSOs shall collect the following information during marine mammal monitoring:

- Date and time that monitored activity begins and ends for each day conducted (monitoring period);
- Construction activities occurring during each daily observation period, including how many and what type of piles driven;
- Deviation from initial proposal in pile numbers, pile types, average driving times, etc.;
- Weather parameters in each monitoring period (*e.g.*, wind speed, percent cloud cover, visibility);
- Water conditions in each monitoring period (*e.g.*, sea state, tide state);
- For each marine mammal sighting:
  - Species, numbers, and, if possible, sex and age class of marine mammals;
  - Description of any observable marine mammal behavior patterns, including bearing and direction of travel and distance from pile driving activity;
  - Location and distance from pile driving activities to marine mammals and distance from the marine mammals to the observation point; and
  - Estimated amount of time that the animals remained in the Level B zone;
- Description of implementation of mitigation measures within each monitoring period (*e.g.*, shutdown or delay);

- Other human activity in the area within each monitoring period

To verify the required monitoring distance, the shutdown zones and ZOIs will be determined by using a range finder or hand-held global positioning system device.

CBJ is required to submit a draft monitoring report within 90 days after completion of the construction work or the expiration of the IHA (if issued), whichever comes earlier. In the case if CBJ intends to renew the IHA (if issued) in a subsequent year, a monitoring report should be submitted 60 days before the expiration of the current IHA (if issued). This report would detail the monitoring protocol, summarize the data recorded during monitoring, and estimate the number of marine mammals that may have been harassed. NMFS would have an opportunity to provide comments on the report, and if NMFS has comments, CBJ would address the comments and submit a final report to NMFS within 30 days.

In addition, NMFS would require CBJ to notify NMFS' Office of Protected Resources and NMFS' Alaska Stranding Coordinator within 48 hours of sighting an injured or dead marine mammal in the construction site. CBJ shall provide NMFS and the Stranding Network with the species or description of the animal(s), the condition of the animal(s) (including carcass condition, if the animal is dead), location, time of first discovery, observed behaviors (if alive), and photo or video (if available).

In the event that CBJ finds an injured or dead marine mammal that is not in the construction area, CBJ would report the same information as listed above to NMFS as soon as operationally feasible.

### **Negligible Impact Analysis and Determination**

NMFS has defined negligible impact as an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the

species or stock through effects on annual rates of recruitment or survival (50 CFR 216.103). A negligible impact finding is based on the lack of likely adverse effects on annual rates of recruitment or survival (*i.e.*, population-level effects). An estimate of the number of takes alone is not enough information on which to base an impact determination. In addition to considering estimates of the number of marine mammals that might be “taken” through harassment, NMFS considers other factors, such as the likely nature of any responses (*e.g.*, intensity, duration), the context of any responses (*e.g.*, critical reproductive time or location, migration), as well as effects on habitat, and the likely effectiveness of the mitigation. We also assess the number, intensity, and context of estimated takes by evaluating this information relative to population status. Consistent with the 1989 preamble for NMFS’ implementing regulations (54 FR 40338; September 29, 1989), the impacts from other past and ongoing anthropogenic activities are incorporated into this analysis via their impacts on the environmental baseline (*e.g.*, as reflected in the regulatory status of the species, population size and growth rate where known, ongoing sources of human-caused mortality, or ambient noise levels).

Only Level B behavioral harassment of harbor seals is expected and authorized. The anticipated Level B harassment is anticipated to be brief and localized. Harbor seals present in the vicinity of the action area and taken by Level B harassment would most likely show overt brief disturbance (startle reaction) and avoidance of the area from elevated noise levels during pile driving and pile removal and the implosion noise.

There are no known important areas for marine mammals, such as feeding, breeding, pupping, or other areas, in the vicinity of CBJ’s project area.

The project also is not expected to have significant adverse effects on affected marine mammals’ habitat, as analyzed in detail in the “Anticipated Effects on Marine Mammal Habitat”

subsection. There is no ESA designated critical area in the vicinity of the Juneau Dock and Harbor. The project activities would not permanently modify existing marine mammal habitat. The activities may kill some fish and cause other fish to leave the area temporarily, thus impacting marine mammals' foraging opportunities in a limited portion of the foraging range. However, because of the short duration of the activities and the relatively small area of the habitat that may be affected, the impacts to marine mammal habitat are not expected to cause significant or long-term negative consequences. Therefore, given the consideration of potential impacts to marine mammal prey species and their physical environment, CBJ's proposed construction activity at Juneau Dock and Harbor would not adversely affect marine mammals through impacts to habitat.

- Injury – no marine mammals would experience Level A harassment.
- Behavioral disturbance – only harbor seals would experience behavioral disturbance from the CBJ's Juneau Dock and Harbor waterfront improvement project. However, as discussed earlier, the area to be affected is small and the duration of the project is short. No other marine mammal species is expected to experience Level B harassment.

- No important habitat for marine mammals exist in the vicinity of the project area.

Therefore, the overall impacts are expected to be insignificant.

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the monitoring and mitigation measures, NMFS preliminarily finds that the total take from the proposed activity will have a negligible impact on all affected marine mammal species or stocks.

### **Small Numbers**



As noted above, only small numbers of incidental take may be authorized under Section 101(a)(5)(D) of the MMPA for specified activities other than military readiness activities. The MMPA does not define small numbers and so, in practice, NMFS compares the number of individuals anticipated to be taken to the most appropriate estimation of the relevant species or stock size in our determination of whether an authorization would be limited to small numbers of marine mammals.

The estimated take of harbor seal would be 35 percent of the population, if each single take were a unique individual. However, this is highly unlikely because the harbor seal in the vicinity of the project area shows site fidelity to small areas for periods of time that can extend between seasons. As discussed earlier, there are one to two resident harbor seals in the project vicinity and are observed within the action area on a regular basis. In addition, a smaller amount of harbor seals have been observed near the DIPAC salmon hatchery which is approximately 5 km north of the project area. Therefore, the total maximum number of individual harbor seals at the project area that could be affected by in-water pile driving during a typical day is assumed to be 43 individuals.

Based on the analysis contained herein of the proposed activity (including the prescribed mitigation and monitoring measures) and the anticipated take of marine mammals, NMFS preliminarily finds that small numbers of each species or stock will be taken relative to the population size of the affected species or stocks.

### **Unmitigable Adverse Impact Subsistence Analysis and Determination**

The proposed Project will occur near but not overlap the subsistence areas in Juneau. The Alaska Department of Fish and Game (ADF&G) was contacted by CBJ regarding subsistence uses in Gastineau Channel and it was confirmed that Gastineau Channel is not a subsistence use

area for harbor seals (CBJ, 2018). Therefore, the proposed project will not adversely impact the availability of any marine mammal species or stocks that are commonly used for subsistence purposes in the Juneau area.

Based on the analysis contained herein of the likely effects of the specified activity on subsistence activities, and taking into consideration the implementation of the monitoring and mitigation measures, NMFS preliminarily finds that the proposed activity will not have unmitigable adverse impact on subsistence use of marine mammals in the project area.

### **Endangered Species Act (ESA)**

No incidental take of ESA-listed species is proposed for authorization or expected to result from this activity. Therefore, NMFS has determined that formal consultation under section 7 of the ESA is not required for this action.

### **Proposed Authorization**

As a result of these preliminary determinations, NMFS proposes to issue an IHA to CBJ for conducting Juneau Dock and Harbor waterfront improvement project in Juneau, Alaska, between June 15, 2019, and June 14, 2020, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated. A draft of the proposed IHA can be found at <https://www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act>.

### **Request for Public Comments**

We request comment on our analyses, the proposed authorization, and any other aspect of this Notice of Proposed IHA for the proposed CBJ Dock and Harbor waterfront improvement project. We also request comment on the potential for renewal of this proposed IHA as described

in the paragraph below. Please include with your comments any supporting data or literature citations to help inform our final decision on the request for MMPA authorization.

On a case-by-case basis, NMFS may issue a second one-year IHA without additional notice when 1) another year of identical or nearly identical activities as described in the Specified Activities section is planned or 2) the activities would not be completed by the time the IHA expires and a second IHA would allow for completion of the activities beyond that described in the Dates and Duration section, provided all of the following conditions are met:

- A request for renewal is received no later than 60 days prior to expiration of the current IHA; and

- The request for renewal must include the following:

(1) An explanation that the activities to be conducted beyond the initial dates either are identical to the previously analyzed activities or include changes so minor (*e.g.*, reduction in pile size) that the changes do not affect the previous analyses, take estimates, or mitigation and monitoring requirements; and

(2) A preliminary monitoring report showing the results of the required monitoring to date and an explanation showing that the monitoring results do not indicate impacts of a scale or nature not previously analyzed or authorized.

Upon review of the request for renewal, the status of the affected species or stocks, and any other pertinent information, NMFS determines that there are no more than minor changes in the activities, the mitigation and monitoring measures remain the same and appropriate, and the original findings remain valid.

Dated: February 28, 2019.

**Donna S. Wieting,**

*Director,*

*Office of Protected Resources,*

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